AMPLIFIER TEST PROCEDURE:

Before energizing, check for proper line fuse (MDL 1.8 amp SLO-BLO, AGC 4 amp for sine wave testing)

1) Energizing the unit: Plug the line cord into a variable transformer, bring up slowly to 117 VAC or 220 VAC as required. If a line transformer is not available, plug the line cord into a working AC outlet of the proper line voltage. Verify that the power indicator lights up.

2) Output signal, no load: Monitor the L. channel output with a 'scope and AC voltmeter. Do not connect any other load at this time. Drive the L. channel input with a 2KHz sine wave until the output is well into clipping. Verify that clipping is symetrical. Repeat for R. channel.

3) Display: Monitor the L channel output with an AC voltmeter (no load). Drive the L channel with a 2KHz sine wave. Verify that the DRS indicator lights at 50 Watts RMS (20.0 VRMS) and that the clipping indicator lights a 200 Watts RMS (40 VRMS). Repeat for R. channel.

4) Output with 8 ohm load: Connect an 8 ohm/250 watt load resitor to the L. channel output terminals and monitor the L. channel output. Apply a 2KHz signal and verify at least 38 VRMS befor clipping. Repeat for R. channel.

5) Distortion: Monitor the L channel output on a THD analyzer with low residual distortion (typ. .002%) and an 8 ohm load connected also. Drive the L. channel to 20 VRMS a THD of .015% 20Hz-20KHz. Repeat for R. channel.
This procedure may also be used for IM distortion testing (SMPTE method) of less than .009%
Note: It may be necessary to use the high pass filter in the THD analyzer if it is so equipped.

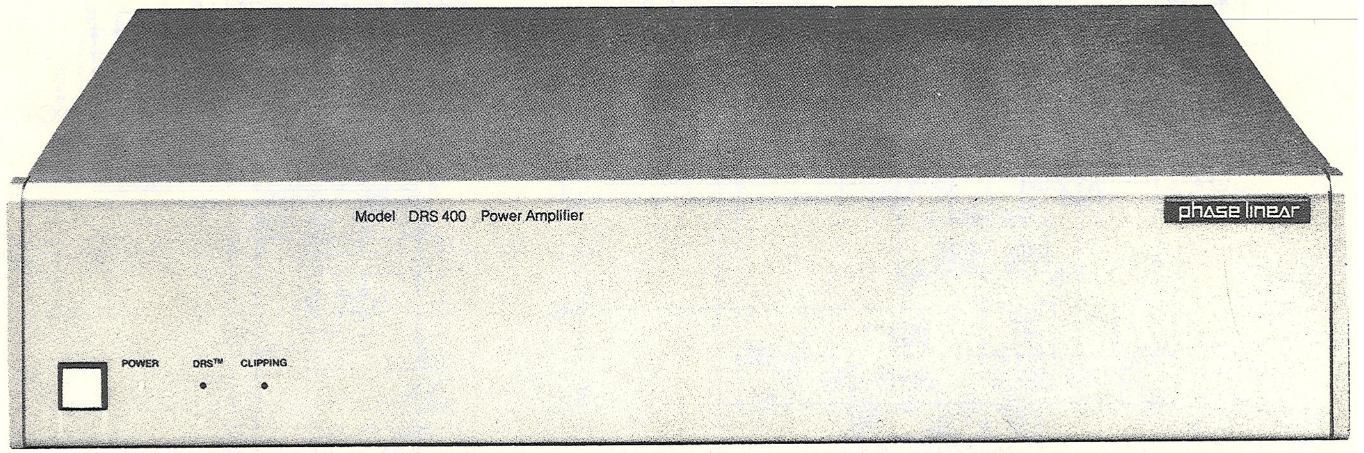
6) Output offset: Measure across the output terminals of each channel and verify less than 10 mV with no input connections.

7) Short circuit test: Drive the L. channel with a 200Hz sine wave to an output of 20 VRMS. Short the output terminals together with a jumper wire for 2-4 seconds. Verify that the output returns to normal after removing the jumper. Repeat for R. channel.

8) Bias current adjustment: Drive both channels with a 20KHz sine wave to an output level of 1 watt (2.8 VRMS) into an 8 ohm load and verify THD of 0.2%.
Alternate technique: with no input connections verify 0.38-0.40 VDC across R119 for R. channel and R219 for L. channel.

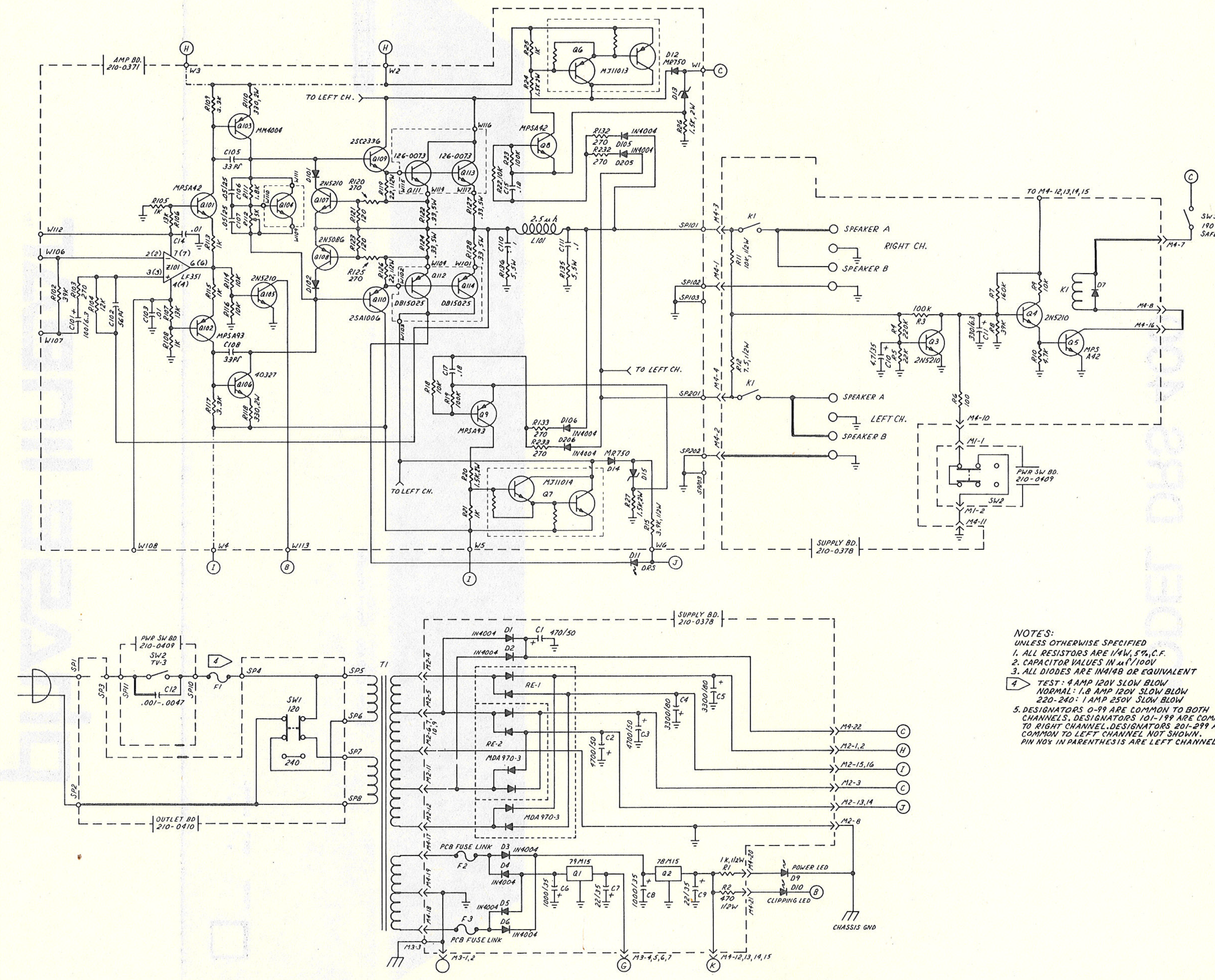
9) Supply switching: Drive both channels with a 2KHz sine wave, increase level and verify supply switching at the collector (case) of the positive and negative output banks.
low supply voltage ±50 VDC
high supply voltage ±80 VDC

SERVICE MANUAL
MODEL DRS 400

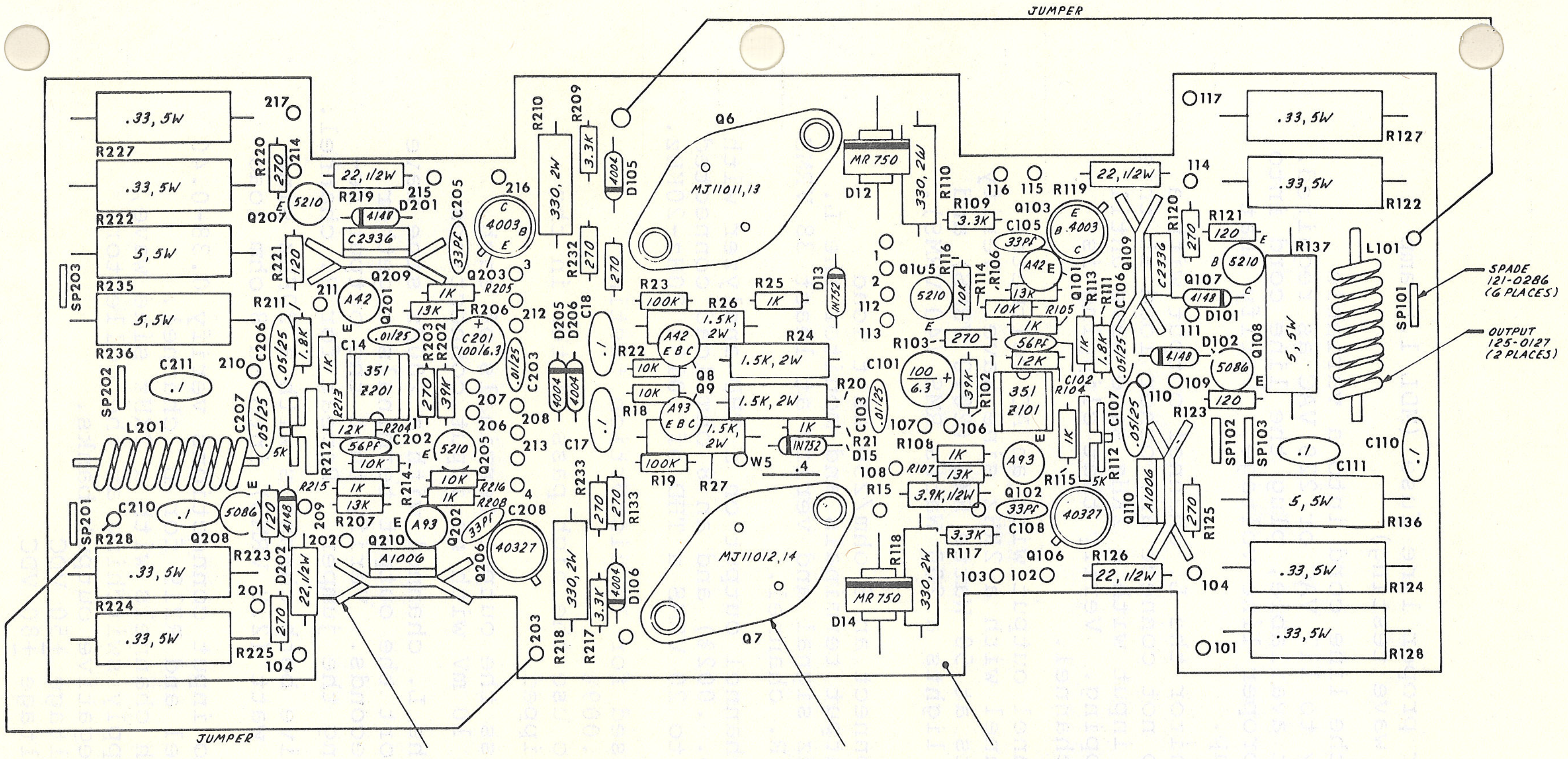


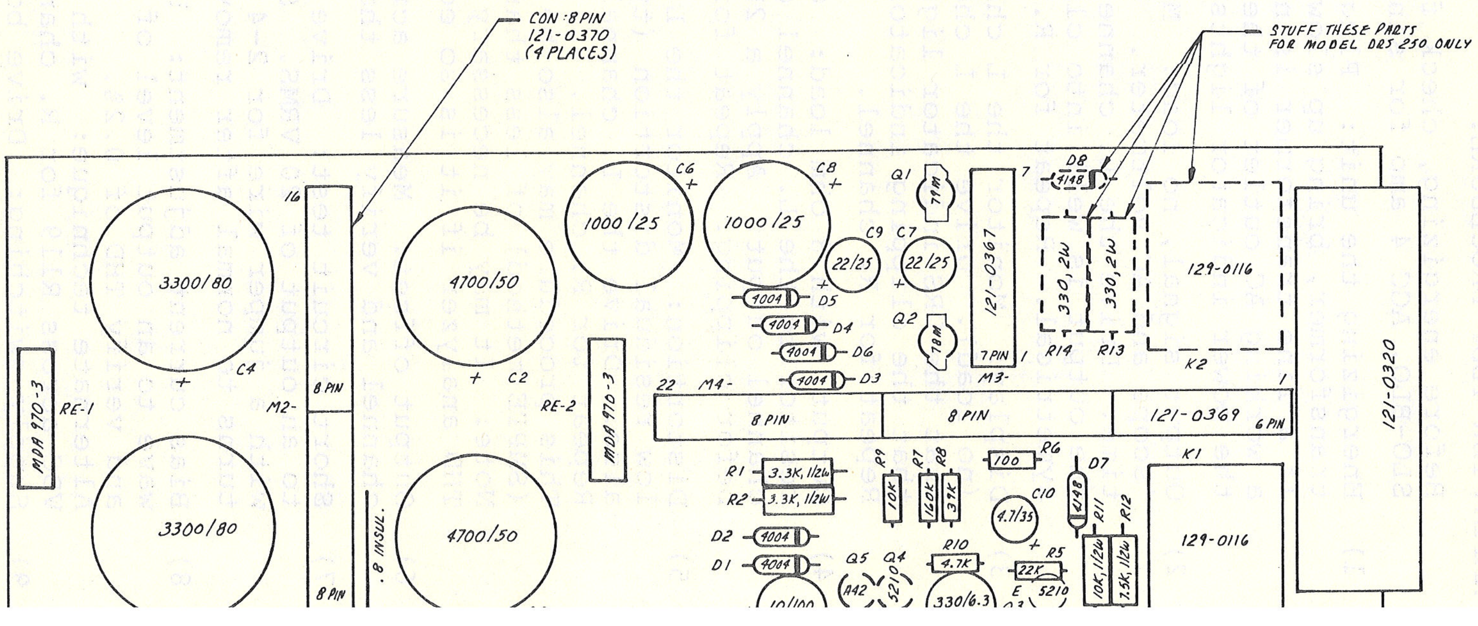
phase linear™

Division of International Jensen Incorporated / an ESMARK Company


AMP BD. 210-0371
SUPPLY BD. 210-0378
PWR SW BD. 210-0409
OUTLET BD. 210-0410
TO LEFT CH.
SPEAKER A
RIGHT CH.
SPEAKER B
LEFT CH.
SW3 190° F SAFETY SW.
POWER LED
CLIPPING LED
CHASSIS GND
PCB FUSE LINK
MJ11013
MJ11014
MDA970-3

NOTES:
UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE 1/4W, 5%, C.F.
2. CAPACITOR VALUES IN µf/100V
3. ALL DIODES ARE IN4148 OR EQUIVALENT
4 TEST: 4 AMP 120V SLOW BLOW
NORMAL: 1.8 AMP 120V SLOW BLOW
220-240: 1 AMP 250V SLOW BLOW
5. DESIGNATORS 0-99 ARE COMMON TO BOTH CHANNELS. DESIGNATORS 101-199 ARE COMMON TO RIGHT CHANNEL. DESIGNATORS 201-299 ARE COMMON TO LEFT CHANNEL NOT SHOWN.
PIN NO's IN PARENTHESIS ARE LEFT CHANNEL


JUMPER
SPADE 121-0286 (6 PLACES)
OUTPUT 125-0127 (2 PLACES)
MJ11011,13
MJ11012,14
Q6
Q7
JUMPER


CON 8 PIN 121-0370 (4 PLACES)
STUFF THESE PARTS FOR MODEL DRS 250 ONLY
3300/80
4700/50
1000/25
MDA 970-3
121-0367
121-0369
121-0320
129-0116
8 PIN